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ELISHA KENT KANE.

BY EPES SARGENT, ESQ.

(With a Portrait of Kane.)

IN presenting the accompanying new and well-engraved portrait of Dr. Kane, for which we are indebted to the liberal publishers of his works, Messrs. Childs & Peterson, of Philadelphia, we shall attempt little more than an outline of the leading events of his brief, but crowded career. Full justice is likely to be done to it by his biographer, Dr. Elder, in the *Life of Kane*, soon to be published; a work which will probably command an amount of public attention equal to that bestowed upon the brilliantly successful "*Arctic Explorations*." Meanwhile we can but glance at some of the rich materials which lie in the path of the biographer and justify his task. Fitly may a portrait of Kane find a place in a journal devoted to the cause of education; for the history of his life shows what may be done by energy of will in training a man for difficult trusts; and it illustrates the importance of discipline in every school of enterprise and adventure, humble or high, physical or intellectual.

Elisha Kent Kane was born in Philadelphia, on the 3d of February, 1822. With a frame far from robust, he manifested from an early age that spirit of exploration which distin-

guished him throughout his life. "Adventures are to the adventurous" would seem to have been his motto. While yet a student he accompanied Professor Rogers in a geological survey of the Blue Mountains of Virginia. Thus early did he show a taste for the natural sciences. Both in geology and botany he became a proficient. In 1843, he graduated from the University of Philadelphia, having gone through the regular course in the medical department of that institution. In chemistry, mineralogy, astronomy, and surgery, his attainments were respectable, and he was a fair classical scholar. The report of those who knew him during his collegiate career is, that he had the rare faculty of acquiring knowledge with rapidity and of summoning it readily from memory for use when needed.

Soon after the completion of his medical studies he obtained an appointment as assistant surgeon in the United States Navy, and solicited active service forthwith. His application was successful. The first American Embassy to China was about to depart; and he accompanied it as assistant physician. His position enabled him to gratify his passion for travel and adventure. He traversed the accessible parts of China; and subsequently visited the Philippines and Ceylon, and penetrated to the interior of India. While in the Island of Luzon, the largest of the Philippine group, he sought with characteristic daring, to see, what the natives assured him no white man had ever seen, the inside of the crater of Tael. Suspended by a bamboo rope from a crag which projected over the abyss, he was let down some two hundred feet to the bottom. Here he remained long enough to make a drawing of the place, and collect some specimens of the scoriæ and débris by which he was surrounded. Great excitement was caused among the natives by this feat. They regarded it as of a sacrilegious nature. With the exception of some unpleasant sensations from the gases of the crater, Kane experienced no ill effects from his descent.

He subsequently visited the Ladrone Islands with Baron Loe, of Prussia; but the travellers were molested by the savage inhabitants, and underwent dangers and hardships which

were too much for the frame of the Baron, who sank under them and perished. Nothing disheartened, Dr. Kane still indulged his indomitable thirst for adventure. He ascended the Himalayas; he passed alone over to Egypt, tracked the Nile as far as the confines of Nubia, and, during some three weeks, explored the tombs of the Pharaohs, in company with the celebrated Professor Leipsius and his associates, who were then engaged in their archæological researches. Wrecked while passing down the Nile, and wounded in an encounter near Alexandria, Kane made his way to Greece, which country he traversed on foot, visiting every scene of classic interest. He returned home by the way of Italy, France, and England, arriving in the United States in the year 1846.

But the repose of a few weeks was quite enough for his active spirit. The war with Mexico broke out, and he sought employment in the campaign; but the War Department had occasion for his services on the coast of Africa, and sent him there. He made an attempt to pass up into the interior and visit the slave-marts of Wydah; an attack of coast fever obliged him to turn back; and in 1847 he was sent home by Commodore Read, invalided. From the effects of this illness he never entirely recovered.

On his arrival in the United States, he found the Mexican war still in progress. Although physically feeble, he applied to President Polk for permission to take a part in the campaign. The request was granted. Kane was sent to Mexico with important dispatches for General Scott. At Vera Cruz he procured as an escort the notorious Colonel Dominguez, with his company. As they were approaching Nopaluca, near Puebla, they learned that a large body of Mexicans were on their way to intercept them. Dominguez here showed the white feather. He refused to proceed any farther, and declared his intention of retreating. By dint of entreaties and threats, Kane finally persuaded him to remain and face the enemy. Kane placed himself at the head of the escort, and took advantage of a rising ground to sweep down upon the advancing enemy, and throw them into disorder. The Mexicans rallied, however, and made a good fight. They were defeated after a

severe skirmish, and many of them taken prisoners, among whom were several Mexican officers of distinction, including General Torrejon, who led the cavalry at Buena Vista, and Major General Antonia Gaona and his son. The younger Gaona had been dangerously wounded by Kane, who, in a personal encounter, had, with his sword, run him through the body. As soon as the skirmish was over Kane devoted his surgical skill to the relief of his antagonist, tying up an artery from which the young soldier's life-blood was ebbing fast. The operation was performed with no better instrument than the bent prong of a fork.

But a new embarrassment now arose. Young Gaona had heard Dominguez threaten to take away the life of the elder Gaona because the latter had once put him in prison. Kane found that the threat was not an idle one. He determined to prevent its execution at all hazards; and when Dominguez insisted on taking the life of Major Gaona, Kane placed himself in front of his prisoners, and threatened to shoot any man who harmed them. Reckless and exasperated, Dominguez ordered his men to charge; but Kane, with his revolver, shot down the first who made a hostile demonstration, a fellow named Pallaseoz. The rest gave way, but returned, urged on by Dominguez; and Kane, though suffering from a severe lance wound in his thigh, had to keep the assassins at bay by discharging his revolver as they came within its reach. In this manner he conducted his prisoners safely to Puebla, where they were placed under the charge of Col. Childs. Kane was detained here by his wound many days, during which he was most tenderly cared for and nursed by Gaona's family, who formed for him a strong attachment.

Returning from Mexico he was detailed for service on the Coast Survey. While in this service he received orders to join the first American Arctic Expedition. "On the 12th of May, 1850," he writes, "while bathing in the tepid waters of the Gulf of Mexico, I received one of those curious little epistles from Washington, which the electric telegraph has made familiar to naval officers. It detached me from the Coast Survey, and ordered me to proceed forthwith to New

York, for duty upon the Arctic Expedition. Seven and a half days later I had accomplished my overland journey of thirteen hundred miles, and in forty hours more was beyond the limits of the United States. The Department had calculated my travelling time to a nicety."

Two little hermaphrodite brigs, the *Advance* and the *Rescue*, were provided for the first Grinnell Expedition. They were placed under the command of Lieut. De Haven, Dr. Kane holding the position of naturalist and surgeon. Leaving New York the 22d of May, 1850, they sailed directly for Cape Comfort, and then along the southwest coast of Greenland to Melville Bay. On the 1st of December they entered Lancaster Sound, and while in company with a British Searching Expedition, under Captain Penny, they discovered the graves of three of Franklin's men. The expeditions separated, and De Haven's party proceeded north to Barrow's Straits, where they were nipped by the ice, frozen in, and detained for five months, during which they drifted with the ice along the southwest coast of Baffin's Bay, a distance of more than a thousand miles. The disruption of the ice commenced on the 5th of June, and in twenty minutes the whole mass, as far as the eye could reach, became one vast field of moving floes. The little brigs soon afterwards emerged into open water, and after some further cruising, returned safely to New York, having been absent a year and four months. Dr. Kane embodied the results of the expedition in a personal narrative which was published by the Messrs. Harper in 1853; but a new and greatly improved edition has been recently issued by Messrs. Childs & Peterson.

The discovery of the graves of some of Franklin's men revived the hopes which had begun to dwindle of further light to be thrown on the fate of the English explorer. Lady Franklin made a pathetic appeal to the President of the United States; and it did not pass unheeded. Kane was sanguine as to the results of further explorations, and inspired others with a portion of his hopefulness. He was willing and forward to take a leading part in another trial; and in December, 1852, he received orders from government to con-

duct a new expedition. The *Advance*, a small brig of a hundred and forty-four tons burden, was placed at his disposal; and through the liberality of Mr. Henry Grinnell and Mr. George Peabody, a thorough outfit was furnished. With eighteen chosen men Kane sailed from New York the 30th of May, 1853.

His health at this period was in a state that would have deterred most men from the slightest irregular exposure. According to Dr. Ainsworth, so severely was Kane afflicted with articular rheumatism while preparing for this last cruise, that it was often necessary to apply frictions to the joints for an hour, before he rose in the morning, in order to enable him to ride to the Navy Yard where the *Advance* was fitting out. In nothing is the indomitable will of the man shown to such a remarkable degree as in this rising up against disease; this heroic resistance to those physical influences which sue for bodily ease and inaction. Those who know what it is to overcome the lassitude induced by disease, so far even as to start up from bed in the morning, may imagine the amount of energy of volition summoned by Kane to brace him up to this defiance of the perils and privations which experience had taught him were the lot of the Arctic navigator.

Having added to his company an interpreter and an Esquimaux hunter, Kane pushed northward with characteristic daring, through Baffin's Bay and into Smith's Sound, till the little brig was frozen in, on September 10th, near a group of rocky islets in the southeastern curve of a bay to which was given the name of Van Rensselaer Harbor. It is in latitude $78^{\circ} 37'$, and longitude $70^{\circ} 40' 6''$. Here two dismal winters were passed. "It is *horrible* — yes, that is the word," writes Kane, at the end of the first winter, "to look forward to another year of disease and darkness, to be met without fresh food and without fuel." Again he writes: "We are contending at odds with angry forces close around us, without one agent or influence within eighteen hundred miles, whose sympathy is on our side." "An Arctic night and an Arctic day *age* a man more rapidly and harshly than a year anywhere else in all this weary world."

Except on Spitzbergen no Christians are known to have passed a winter so near to the pole. The thermometer fell to ninety-nine degrees below the freezing point. Chloroform and chloric ether were congealed. The effect of the darkness and the cold upon the Esquimaux dogs belonging to the party was such that fifty-seven died of affections of the brain, which began with fits, followed by lunacy, and sometimes by lock-jaw. The men were nearly all disabled by scurvy, and frequently affected, after severe exposure, by a form of insanity. In a sledge expedition undertaken in March, 1854, four men were left frozen and disabled, during a period of intense cold, in a tent on the ice. Kane started with a party of nine to rescue them, which he succeeded in doing, though nearly blinded by snow-drifts. In returning to the brig the whole party were benumbed; and after travelling between eighty and ninety miles, most of the way dragging a heavy sledge, they reached the brig, but in a state of delirium and extreme prostration. Two of the men subsequently died from the effects of their sufferings; and two had to undergo amputations of parts of the feet. Kane himself was delirious, and for some time confined to his berth.

On the 24th of May, 1855, finding that the *Advance* was hopelessly frozen in, beyond the help of any summer thaw, Dr. Kane made preparations to abandon her. What necessary provisions, documents, instruments, &c., could be taken, were placed on sledges and in boats, which were dragged by the men over the ice with great difficulty for a distance of three hundred miles. Here, having reached open water, the party took to their boats, and, after many hazardous escapes and the death of one man from over-exertion, made their way, a distance of thirteen hundred miles, to the Danish settlement of Upernavik, in Greenland.

Meanwhile serious apprehensions had been created in the United States for the safety of the party, of whom nothing had been heard for two years. The result is familiar. An appropriation of \$150,000 was made by Congress, and the *Arctic* and the *Release*, under the command of Lieut. Hartstene, were detailed for the prosecution of a search. This expedition

sailed from New York in April, 1855, and on the 13th of the following September fell in with Kane and the remnant of his party at Disco Island. On the 11th of October they all, rescuers and rescued, arrived in New York. Kane made his report to the Navy Department. The principal discovery which he related was that of the existence of an open Polar Sea, some miles to the north of the winter quarters of the *Advance*. This discovery rests on the testimony of Morton, one of Kane's most trusted men, who had as his companion on the occasion the Esquimaux hunter, Hans. Restored once more to home and friends, Kane commenced the preparation of his narrative, which, under the title of "Arctic Explorations," has procured for him so wide a celebrity both in this country and in Europe. "Poor as it is, it has been my coffin," he remarked to a friend shortly after its completion. No doubt the severe mental application which he underwent while his body was yet prostrated by his Arctic exposures and fatigues, aggravated all his maladies. In November, 1856, he visited England, but was unable to appear in public and receive the honors and attentions which were liberally proffered. His health continued to decline; and just as he was approaching the zenith of his fame, and the reputation of his book was beginning to add to his renown as an explorer that of an admirable historian, the progress of disease warned him that death was near at hand. From England Kane went to St. Thomas and Havana; and, at the latter place, on the 16th of February, 1857, he closed his brief but brilliant mortal career.

Dr. F. S. Ainsworth who attended him in his last moments says: "There was no indication of suffering during his last hours, and he died apparently from simple exhaustion. The tenacity of life in this case was quite remarkable. A constitution broken by chronic disease of many years' standing — a series of hardships and exposures almost unheard of, with all the depressing addition of care and responsibility — followed by an affection which for some months threatened his life; add to all these an attack of apoplexy, paralyzing entirely the right side, and in two months after a relapse affecting the whole body, and one can hardly conceive how life could have been

sustained for so long a period as five days after the last shock."

In our imperfect biographical sketch we have dealt rather with what was *done* by this heroic young man than with the moral attributes which he displayed. But it is the latter which give him his true title to our admiration and respect. Like all truly great men he had an entire trust in a supervising Providence, and this imparted incalculable power to his individual will, and helped him to defy danger, privation, and disease, or to pass them by as slight things in the attainment of his object. The devotional sentiment was strong in him to uphold and impel, and not a mere rhapsodical emotion of the moment. "The intense beauty of the Arctic firmament," he writes, "can hardly be imagined. I am afraid to speak of some of these night-scenes. I have trodden the deck and the floes, when the life of earth seemed suspended, its movements, its sounds, its colorings, its companionships; and as I looked on the radiant hemisphere, circling above me as if rendering worship to the unseen Centre of light, I have ejaculated in humility of spirit, 'Lord, what is man, that thou art mindful of him!'"

With all his keen susceptibility to the beautiful, and his high æsthetic and scientific culture, Kane seems to have united those qualities which make the successful man of action and the prompt and energetic leader. No emergency could paralyze his equanimity and self-possession; no peril destroy his confidence in his resources—his indomitable hopefulness. He was a strict disciplinarian; too strict, some have thought. But on this point he entertained decided views. Absolute subordination he exacted on all occasions. "I must have an exact discipline, a rigid routine, and a perfectly thought-out organization," he writes. With all his sanguine impulsiveness of character no man could prize more the importance of careful forethought in the circumstances in which he was placed. He had learned the habit and the need of obedience and it is such learning that is one of the foremost qualifications for command. Let every youth who would rise in the world remember this. The deserter, Godfrey, he pursued

with a pistol, and would have shot him had he not succumbed. This act has called forth the rebuke of an English reviewer; but it was by such hardihood of determination that Kane retained his power over his men; a power essential to the preservation of the whole party. The least quailing would have broken the charm. And yet he had a woman's tenderness for the weak and suffering; performing the most menial offices for them, and sacrificing his own health and strength to theirs.

He has been called a martinet in his discipline; but its minutest details seem to have been important in contributing to the grand result — the rescue of his party from almost unexampled straits and difficulties, under circumstances the most trying to a commander. In the *school* of adversity, as in our schools for juvenile instruction, the worth of what Kane calls "an exact discipline, a rigid routine, and a perfectly thought-out organization," cannot be overrated. Is there not too great a tendency among our people to scoff at forms and ceremonies in our various organizations? We forget that there is but One "whose service is perfect freedom."

From our biographical outline it will be seen that this man's life must be a full and a rich one; full and rich not merely in the variety of his adventures and travelling experiences, but in the heroic soul which he threw into them, and which gives them their significance and their interest. No ancient knight ever showed more of the best elements of what Burke felt was concentrated in the word *chivalry* than this young American surgeon, traversing the globe, and hastening to any point, whether arctic or tropical, where a daring and self-sacrificing spirit could distinguish itself by noble service. It will be seen that his "Arctic Explorations" were but the sequel of kindred achievements. The Life of such a man, executed as it will be by Dr. Elder, and presented by Messrs. Childs & Peterson, the publishers, will be a permanent addition to our literature, of which, as Americans, we shall have reason to be proud.

SOME THOUGHTS CONCERNING THE ORIGIN,
RELATION, AND PROGRESS OF LANGUAGE.

WHEN we glance at the immense blessings of language, by which we hold intercourse with each other and communicate our thoughts and feelings, we cannot but consider it a special gift of Providence, bestowed for the benefit of man. And yet it may be asked, What is language? It is not merely the power of producing sounds; for animals even, though with less developed organs, possess that power; but it is also the expression of thought and ideas; for although in its manifestation it must be considered as a physical production, yet it seems to designate that point of contact where mind and matter artificially, but most intimately, blend, so that each is preserved in the combination. To say that we feel in words would not be correct; nor do we always think in words; for if so, then an intelligent mute must be considered as deprived of both thought and feeling. Animals as well as men have the power of imagination by which they reproduce pictures from their memory; yet it is given to man alone to reduce and analyze them into their component parts. After he has done this distinctly he will find a sound or sign for each object, and will bestow the same on all similar ones; this task is effected by comparison, which has only been granted to beings endowed with reason, viz., to man. The choice of appropriate sounds to designate an object was either the work of nature or the result of mutual agreement, for a solitary man would never have attempted to speak, although possessed of the necessary organs. Language, therefore,—by which individuals may hold intercourse with each other, and live not only an animal existence adapted to the present, but also hold a record of the past, and even discuss the future,—stands forth as the cornerstone of our social system.

But without entering further into what some might call metaphysical definitions of language, we will state our conviction, that the original language of mankind, like that of children, was at first uttered in interjections, to which were soon

added words imitating sounds, — derived from the elements as well as from animals, — of which a great number exist to this day, and resemble each other in different languages. Other expressions for objects and ideas, which are not to be distinguished by sound, were afterwards added by laws and analogies unknown to us. It is a matter of astonishment, when we trace the antiquity of some words, such as father, mother, sister, daughter, and many others which are found to resemble each other in all languages derived from the Sanscrit, which was spoken several thousand years before the Christian era in the valleys of Hindostan. To the student of antiquity it must be known that Europe was colonized from the west of Asia, and that the Greek language especially shows its Indo-Persian descent by the resemblance of many of its words, the richness of its terminations, the dual forms, the three genders, and the abundance of its conjunctions, which always show a high degree of cultivation. Nor did the Latins and other Italian populations fail to derive many of their words from the same source. Yet if we study the languages of Europe, which, as before stated, must have the same origin, what a difference do we find between the Latin and its daughter languages and the German, or between the German and the Slavonic. We ascribe these changes partly to the law of progress and gradual development, and partly to the addition of new words; for separate members of the great family of man must have penetrated to the distant regions of Europe, where they found objects which they had never seen before, and to which they were placed in a new relation, thus requiring the aid of new words.

There is, however, another and important element, which determines the character of a language, and that is the character of the nation itself. Language in its formation represents a historical fact; its sounds and idioms display the greatness or littleness, the pursuits and tendencies, the poetic or prosaic nature of those who speak it, and their literature is a mirror of their past and present condition. As the manufacturer suits his instrument to his purpose, so mind ever moulds the form of its expressions. For instance, the Latin language

conveys the impression of the power and dignity which characterized the Romans. Its great facility for transposing words leads to euphonious and effective expression, in which resides the genius of a language. This is principally owing to the fact, that the termination of each adjective, however separated by intervening words from the noun which it qualifies, determines its reference, while in English it is unchanged, and must therefore immediately precede or follow the modified word. One of the most characteristic features of the French language is that the words have no decided accent, although custom puts it often on the last syllable; hence its extreme liveliness, so accordant with the vivacious temperament of the French. But this briskness is purchased at the expense of that dignity which gives such force and impressiveness to the language of Spain. Some French writers of thoughtful mind have complained of its inadequacy to express elevated ideas; hence it is accused of being best adapted to the eloquence of indifference or to colloquial intercourse. This view is somewhat too severe, since every educated man, who knows the merits of French mathematical works, must recognize the power of that language for exact definitions and a clear analysis of ideas. We, however, concur in the sentiment, that it shows to high advantage in the writings of Molière, Madame de Staël, &c., while it hardly responds to the heroic emotions uttered in the tragedies of Racine and Corneille. The Germans are rich in thought and sentiment, and their language is characteristic of these natural qualities. Almost unmixed with foreign words, it obtains all its derivatives from its own roots, and conveys at once their meaning and purpose. In spite of the apparent hardness of some of its sounds it is extremely well adapted to poetry, and even for the translation of Greek and Roman poems in their own versification. For conversation it lacks the fluency of the French and Italian languages, but its construction is calculated to develop thought, and therefore it may be compared to a gold mine, the surface of which presents rough rocks of inferior appearance, while rich treasures are hidden within. The English by its Saxon basis is related to the German, by its Norman intermixture to

the French, by its Latin and Greek derivations to the classic languages, and by its Celtic terms to the ancient Briton. The activity and promptness of action, which lead the English to economize time, are stamped on their language, where words of many syllables are shortened at the expense of a certain noble grace. It has often sacrificed beauty to utility. In this respect it forms a contrast to the musical sweetness of the Italian language, which appears like a classical statue of some divinity, where the artist was guided by noble taste. Compare the words *tavola* with table, *pianta* with plant, *angelo* with angel, *populo* with people, *nazione* with nation, and you have an idea how such a language contains music within itself, not however without some danger to Italian authors of making the sense subservient to the sound. The English language has been preëminently able to express poetry, philosophy, eloquence, &c., of the highest order, and we must therefore consider the following old Spanish saying true with regard to its general bearing, although containing some partiality: "The Spanish is the language of the gods, the French of ladies, the Italian of singers, the English of merchants, the German that of horses," for which we would humbly substitute, of *philosophers*. From these facts we may infer there is some peculiar excellence in every language, which is an important consideration, since they seem destined to amalgamate in the lapse of time. This mission seems particularly reserved for the English language, now spoken by thirty millions inhabiting the Old World, and by as many more in America, which country bids fair, according to Prof. Guyot's original expression, "to become the great hotel of all nations."

We have already spoken of the threefold character of the English language. Reverting to history we find that the Anglo-Saxons, in the year 449, took possession of England; they, in connection with the Danes and Norwegians, who occasionally made a descent upon its shores, Germanized the language of the country. In the year 1066, the Normans, under William the Conqueror, brought with them the French language, together with many new laws, fashions, and customs, and, as their civilization was of a higher or more refined order

than that of the Saxons, the use of French words was applied to many new objects and ideas, and many of the old Saxon words put aside and superseded, leaving, however, intact the names of familiar objects and actions, which lay too deeply impressed upon the popular mind to be easily eradicated. Thus it happens that the English words for house, garden, arm, hand, finger, stand, fall, eat, drink, etc., are Saxon or nearly German, as are also nearly all the numerals, pronouns, prepositions, adverbs, and conjunctions of the English language. Some words show, in a very interesting manner, the principle according to which the German or French languages have influenced their formation; for instance, the names of the domestic animals, cow, ox, sheep, swine, &c., are all Saxon, while the names of the meat of these animals, beef, mutton, pork, etc., are all French, showing that the Normans were superior in the art of cooking. The Saxon element represents mostly nature; the Norman-French, art. Again, the words, clock, stool, bed, looking-glass, etc., are Saxon,—but the term furniture, involving a whole class, is French. As the same is true in many other instances, it shows that terms of more comprehensive meaning, whether physical or intellectual, are derived from the French or Latin source. This is the reason why an English scholar could soon understand a conversation in German, applied to common objects, while to understand the classical expressions of literature would prove a matter of great difficulty. In the French language, the case is the reverse; for it is easier for an Englishman to understand a treatise of Madame de Staël, Racine, or Corneille, than a French newspaper filled with the news and small talk of the day. In construction and forms of grammar, however, the German presents undoubtedly more difficulties, and leaves more scope for thought and imagination.

The compound character of the English language, and its tendency for abbreviation, have led to an unavoidable evil, that of assimilating certain words which originally have been entirely distinct from each other. We will allude to some of them in sentences which are quite correct, although violating the rules of taste, viz.: The teacher told Wright

to write *rite* right. I met the *fair* lady at the *fair*. I have *seen* the first *scene*. I *saw* the *saw* yesterday. I can *see* the *sea*. The German words from which these ambiguous ones are derived are quite distinct ; for instance, in the last example, *sehen* (to see) and *See* (sea). To prove that ludicrous mistakes may be committed by the use of such words, we will mention the notice read by a clergyman, viz. : " Mr. Smith having gone to sea, his wife requests the prayers of the congregation," which he read thus : " Mr. Smith, having gone to see his wife, requests the prayers of the congregation." This resemblance in the pronunciation of many words has given rise to numerous puns, which are often used as a paltry substitute for wit ; but whilst the distinctive features of such words lie in their orthography, there are other words, in which the same letters have an entirely different sound, without any apparent reason, making it very difficult for children to learn to write them correctly, and utterly confounding foreigners, who attempt to pronounce them ; as, for instance, *ough* with its different sounds, as seen in the words ought, cough, plough, rough, dough, &c. These matters call loudly for reform, although we fear it will be difficult to find a different method of writing, which will be generally adopted.

Language, when historically considered, is not dead like a piece of clay, to be moulded according to pleasure, but an organic creation marching along with the development of mankind and shooting new buds and branches every new Spring in the season of time. A lexicon, that would assume a dictatorship in presenting a standard mode of expression for the future, would soon be found sorely behind the time. An Englishman of the present day would, perhaps, have some difficulty to understand one of the 16th century ; not so much on account of the difference of their words, as of the different meaning they have received ; this is seen in the words villain, knave, wench, &c. At the time of chivalry and in the courts of kings, a fool could afford to be witty, but now a fool is nothing but a fool ; a " humbug," a more modern creation, seems to be something between a rogue and a fool.

Every era has a stamp peculiar to itself. There has been

a chivalrous era; a religious era, when many phrases and proverbs of the Bible were so often quoted that they became a part of the native language; a commercial era, when the tendencies for material pursuits, for commerce, agriculture, manufactures, and navigation, caused men to apply a figurative meaning to many physical facts and actions. It is especially in the English language that we find expressions derived from this source. Who but the English could have invented the phrase, "to embark in business," considering that the sea, which surrounds England, is an indispensable element for merchants, by export and import, to make their fortunes. The Germans simply say, "begin business;" but how much more imaginative is the English expression, showing at once the frail vessel, on which the merchant has set out, now tossed up to the clouds in dangerous sublimity, then dashed into the abyss below. Again, such a term as "endorse an opinion," is evidently taken from the endorsement of bills. When politics and the public trials by law became a topic of absorbing interest to the whole community, many new terms were added to the language. We quote the following extract from a newspaper, not merely because of its humor, but because it shows the fact, that many scientific and law terms are based upon a foundation closely connected with material pursuits. "The lawyer who filed a bill, shaved a note, cut an acquaintance, split a hair, made an entry, got up a case, framed an indictment, impanelled a jury, put them into a box, nailed a witness, hammered a judge, and bored a whole court, all in one day, has since laid down law and turned carpenter." I might pursue this subject farther, and show the mercantile tendency of the age to shorten some expressions by substituting a noun for a phrase; or how else could we understand the expressions frequently used in shipping announcements, or referring to the state of the market? as, Coffee is languid and drooping; Sugar is extremely active; Butter is very firm; Pig iron is buoyant; Feathers are extremely heavy; There is considerable depression in spirits. Some of these expressions may be considered low, and out of place in dignified language, while

others are universally accepted. They, however, may only be a part of mercantile language, as sailors and hunters have their own, and therefore supply no standard terms for the community; and yet the tendency of this age is such that an American farmer (a combination of peasant and trader) will easily understand them.

The borrowing or adopting of new words is also connected with the progress of language. It is hardly possible to invent absolutely new words, which would be universally adopted; and difficult to form words of such deep meaning as did the sages of antiquity. That they enriched their language, and ours too, by the composition of some excellent words, will be acknowledged by a grateful posterity. What can, for instance, excel the depth and ingenuity of meaning in the words, enthusiasm (inspiration by God), education (the act of drawing out), religion (the act of binding again), imagination (forming a picture), instruction (the act of building in), and many others? But even now are we not often in want of new words, or can we express all the shades of thought and feeling? Would it not be sometimes convenient to have a word with which to express a compound idea, for which we are forced to use one or two sentences? That the necessity for it exists, cannot be denied; for why else should we have been compelled to adopt several French words, such as "*naïve*" "*esprit*," "*à la mode*," "*comme il faut*," "*ennui*," &c.? For this word, *ennui*, there is absolutely not a single word in English which conveys the full meaning that the time hangs heavy on us, without accusing any one of it; for when we say, "he annoys me," "he bores me," or "it is tedious," we blame somebody or something out of ourselves. The French and Germans, in their turn, have been obliged to adopt the word "comfortable" into the code of their conversational language. The French have not even a word for "home," instead of which, they say "*chez moi*" (with myself). The question may arise, whether it is well to adorn and furnish our own nest with the plumes of others; for we must either submit to this unavoidable necessity, which may be the first step towards the amalgamation of all languages into a universal one, or we must

open the door for some common terms which have hitherto not received the sanction of lexicographers, nor been recognized as the legitimate offspring of the mother language. The latter practice has already given rise to the use of many words in America which are not recognized as standard terms in England, as, rowdy, bogus, &c. How many Americans will not think "locate" a purely classical word; and yet it is not used in England. Others have a different meaning there, as, homely, ugly, &c. An American, reading *Uncle Tom's Cabin*, and admiring the eloquent style of Mrs. Stowe, will hardly find any striking improprieties in her language, which seems to interpret the inmost emotions of true American thought and feeling; yet English critics in their review of the work have taken the trouble to extract whole tables of delinquencies in language, or of what they call "Americanisms." No doubt they went too far in castigating so severely the popular expressions of a popular book; it may even show a ridiculous presumption to blame Americans for expressing themselves in their own native style and manner; for they have no idea of the difficulties which beset them in choosing from so many spurious and idiomatic expressions, those which are considered pure and classical. A classical standard of language is no doubt necessary to prevent literary twaddlers from using their own vicious and inflated language, and from applying their own perverted taste as a criterion for the use of new words and expressions. Such excellent commentaries as those of Webster and Worcester will always have a salutary influence in deciding about the pronunciation, etymology, meaning, and bearing of words and phrases, and afford a key for deciphering the literary treasures of past times; yet they are not infallible, and require a constant revision. They may even be abused, since it is evident that not all the words can be recommended or defended for present use. Some have fallen into disuse, some have never been generally received, while others are mere logical deductions that might be formed from given roots. The best dictionary, with all its philosophic or artificial definitions, may be considered as a law, which, like political laws, may have its force and power with the present

generation, but must ultimately yield to the living principle that supports them. This principle is connected with man himself, in his physical, moral, and intellectual development, and, like him, must change its outward form and manifestation.

The styles of language have been very appropriately classified into the "philosophical" and "logical." The former is connected with the order of ideas as they arise in man's mind; for instance, the Latins would not hesitate to say, "*Haud fratrem meum vidi*" (I have *not* seen my brother); that is, they would put the negation first, the object second, and the subject and predicate last, if the meaning required it. To explain this seeming anomaly it will be observed that the Latins express by position what we express by emphasis, which in this instance rests on *not* and brother. The style of the English language, more logical but less imaginative and philosophical, requires first the subject, next the predicate, and last the object. As they progress, languages assume more and more that logical character which is, for instance, seen in the conjugation of verbs. We call irregular verbs those which in their past tenses change the vowel root of the infinitive, as, ring, rang, rung, speak, spoke, spoken; we call those regular which do not change their roots, but add a syllable to the original word, as, rest, rested; learn, learned. Now considering that the so-called irregular verbs generally express the most common and primitive actions of life, it is evident that the change in the root proceeds from a musical inflection of the voice, in order to indicate a past tense by a distinct sound; while all those verbs that have been added since the primitive era of our language, are conjugated after the regular pattern in a logical manner. Logic in this sense applies to form, while philosophy allies itself to the soul and appears the offspring of its dictation. Our dictionaries are full of logical derivations, in which, if we should find such words as squeezable, unstrangulable, sculpturesque, researchfulness, incoherentific, unsufficingness, condemnableness, blamableness, &c., we could, perhaps, understand their meaning, although we may never have heard them used. But we should be wiser to postpone the use of such words till they arise from natural conditions,

for since "necessity is the mother of invention" we may safely trust to her to supply the word when it is wanted. We will suppose that at the beginning of the formation of the English language our ancestors adopted the word "right" from the German *recht*, as from the Latin *rectus*, which means straight. We will farther suppose that some logical experimentalist would have proposed the word "unright," as the best one for expressing the opposite of right; what would language have gained by it? Nothing; because the people, guided by an innate philosophical principle, have chosen the word, "wrong" instead, which seems derived from the verb *wring*, *wrung*, that is, what is *wrung* from the right. For the same idea the Latins have the word "tortum," which also indicates something crooked. "Right," therefore, is synonymous to what is *straight*, and "wrong" to what is *crooked*. Such is the philosophical growth of the early portions of our language, although its creative power seems gradually to have subsided. Philosophy is the science of internal truth; it is conscious humanity, reflected within its own mirror. Philosophical languages are inventive, imaginative, and therefore eminently poetical. A logical language is more subservient to reason, and therefore is the best interpreter of ideas prevalent in such an age as ours, which is in a great degree practical, hairsplitting, and often sacrifices feeling on the altar of reason.

We hope to have proved that every language must necessarily change many words and the meaning of them, and that this change will be effected by spontaneous agreement, and not by artificial means. This will be the case in America especially, where there is not, as in France, a brilliant capital, like Paris, which dictates laws to the nation, sanctions only terms used in elegant conversation, and condemns provincial expressions, while it proposes amendments in pronunciation which display polish rather than force. There is also an academy in Paris, composed of the most distinguished savans of France, partly engaged in compiling a standard dictionary of the French language, of which a witty French writer says:

"The book they are writing is like a road without end,
Complete at each station, yet always to mend."

Although there is not in the United States a recognized law-giving authority in these matters, there will always be one acknowledged by tacit consent, namely, the works and expressions of great enlightened minds, whether poets, philosophers, or statesmen, to whose eloquent strains the whole nation lends an admiring ear, while their melodious echo will resound for many years to come. Yet the popular men of our day give expression to the national feeling, for to appeal to the hearts of the people, they must speak their language. There are, however, different ways of doing this. Ambitious men, who act only for their own selfish ends, will address themselves to the lower faculties and passions of mankind, with adequate language, not caring for its refinement, provided they get by it money and honors; but the noble-minded champions of truth, appealing to the nobler part of human nature, will shape the very forms of their expression according to the pure standard of taste, thus acting as a touchstone to cleanse language from the dross which ignorance, egotism, and affectation have mixed with the pure metal.

A language, which, inspired by enthusiasm, interprets the purpose and will of the Creator, will ever be pleasant to human ears, and is destined to immortality.

H. K.

THE INFLUENCE OF TEACHING UPON HEALTH.

THERE is an impression, not very general, perhaps, yet somewhat common, that the labors of the teacher at the present day are injurious to health, and have a certain tendency to abridge the period of natural life. This opinion is entertained by teachers, and by others whose observations have extended to the subject. As a matter of common belief, it may have had its origin in, or may have been strengthened by, the well known fact that, every year, many teachers, of seemingly good constitution, are cut down in their labors ere they have passed the meridian of life. This has been particularly noticeable within a few years past. And it is not very strange that such

an opinion should prevail, to some extent, among teachers; for, with many of them, it is literally true, that their nerves, jaded by the arduous labors required by an exacting public, play out, in their sleeping and their waking hours, a plaintive dirge o'er wasting health and departed vigor.

Unfortunately, we have very few reliable data to aid us in testing the correctness of this impression. Sanitary reports and vital statistics are of comparatively recent origin in this country, and are altogether too imperfect for a purpose so specific and important. The fact that, within a few years, several teachers have deceased at an early age, or that a similar number have attained to an unusual longevity, is a circumstance too limited to determine the general result. That some occupations are more favorable to health and longevity than others, few will be disposed to deny. But there are a multitude of circumstances that have a bearing upon this question and must be taken fully into the account. It is but recently that any considerable number of persons have pursued the business of teaching, as a regular profession; for it is well known, that a majority of the professors and instructors in our American colleges have been fitted for other professions, and have spent, in many instances, no inconsiderable portion of their lives in other pursuits than teaching. Then, again, what is the period of life allotted to man? How long *ought* the teacher to live? Does he reside in a locality of average healthfulness? Is he exempt from hereditary disease? And is he innocent of the vices, follies, and improprieties that sap the vital powers and summon man so soon to an early grave? But without endorsing or questioning the truth of popular opinion in this particular case, it may not be unprofitable to examine, briefly, the bearings of the teacher's labors upon health, both as they are known to be, at present, and as it would seem they ought to be.

It is frequently asserted that the whole life of the student and man of literary pursuits is contrary to nature; that the constant exercise of the mind is disproportionate to that of his body, and that he is bent down to his study table in an unnatural attitude, and in a narrow room with confined air.

As to the pretended injurious influence of the exercise of the mind, we demur *in toto*. The readers of the "Teacher" were favored, in a recent number, with an article entitled, "*Does Study Injure the Health?*" That article, from an able pen, presents the case of the student in a clear light, and shows that study does not, of itself, injure the health; and this view of the subject is certainly substantiated by historical evidence and by living testimony; for, all through the annals of literary men, there are innumerable instances of those who have attained to an unusual age, with healthy bodies, and mind vigorous and unimpaired; while there are those, also, now living, far advanced in the evening of life, yet fresh and brilliant still. The same article also demonstrates that there is nothing in the proper attitude of the student at his books that is injurious, and least of all, "contrary to nature." And in this respect the teacher in the school-room has the advantage, even of the pupils, for he is not as much confined in any one particular attitude, but can, at his option, sit erect, stand, or walk, and at the same time perform most of his duties equally well.

In regard to the teacher's confinement in close, unventilated rooms, it is too true that many of our school-rooms are not constructed with a view to the comfort and health of the occupants. But the teacher is supposed to know something of the laws of health, and especially of the necessity of pure air; and, knowing this, his ingenuity is certainly not to be coveted if he cannot devise a way to have partial ventilation, at least, either by dropping a window, or, as has been done, by applying a handsaw to the panels of the door and ceiling of the room, — an experiment which has proved successful, not only in securing good air, but in calling the attention of people to the ill-ventilated room, which finally resulted in the erection of a new and improved building.

It would be vastly easier to prove that the teacher is favored in respect to opportunities for physical exercise, than that his labors are prejudicial to it. He is in the school-room fewer hours than most people of sedentary occupation are in their shops or offices, and consequently has abundant leisure, and knows just when he can command it. It is a fact that teach-

ers *do* take too little exercise ; but it is a fact, also, that they *may* take much more. The disposition to take it, and not the opportunity, is at fault.

Regularity, one of the requisites for health, both of body and mind, is preëminently the teacher's prerogative. It applies to his labors, both in time and amount, and to his leisure.

But there are other influences of teaching that are prejudicial to health.

The *sameness of duties*, a kind of tread-mill routine, which the teacher is quite apt to acquire, affects the health injuriously by preventing a free development of mind, and not allowing that healthy, reciprocal influence which a growing mind and a sound body are calculated to exert upon each other. A mind partially developed, and then cramped and arrested in its growth, has a less beneficial influence upon bodily health, than the mind of the savage, whose proper development, strictly speaking, is never commenced. The tone of such a body is always low, and life seems literally to "drag" along. But the teacher has it in his power to avoid or counteract this sameness, by special attention to his own self-culture, and by efforts to rise in his profession, and to secure for himself labors more varied and expanding in their influence.

The teacher is required to perform *too much labor*, especially in public schools and large institutions. The number of hours he is occupied, in many instances, is too great, and the multitude of duties that literally press upon him are more than the human constitution can long endure. Few persons, besides practical educators and physicians, are fully aware of this ; but it is a truth which is sure to be recognized in due time.

The physical system is liable to great exhaustion, occasioned by the almost *incessant talking* which the teacher's calling renders necessary. This talking, too, is done in the usual conversational tone, and does not admit of that varied exercise of the vocal organs that is afforded in public speaking or social intercourse. The tendency of this is to destroy the tone of the vocal organs (Bronchitis, so called,) which soon become

enfeebled and diseased, implicating adjacent organs, and finally extending to the lungs and terminating in pulmonary complaints, — a class of maladies to which, it is said, teachers are peculiarly liable.

The *intensity with which the mind is tasked* in the school-room is another fruitful source of ill health. The government of the school, with all its harassing cares and the hearing of recitations, with the continual exercise of ingenuity which illustration and explanation demand, must all be attended to at the same time, without sufficient opportunity for that frequent relaxation which is so necessary to the mind as well as to the body. This not only exhausts the physical energies and unstrings the nerves, but it produces an over-excitement of the brain, — an organ whose diseases are to be recognized as another class which is yearly removing many of our hard-working educators.

Borrowing trouble, and too much anxiety and solicitude, are also wearing out many valuable lives in the school-room. The peculiar relation in which teachers often stand to the public and their patrons is a source of constant anxiety, especially to a sensitive mind. Then, there are aspiring teachers, who are goaded by an inordinate ambition, until they frequently sink, worn out in their labors, ere they have attained the goal of their desires. And there is still another class, who are more honorable victims in the race, — the conscientious and sympathetic teachers, who become so deeply interested in the progress and welfare of their pupils, that they allow themselves, unconsciously, oftentimes, to be over-taxed beyond the system's power of endurance or recuperation.

This is all wrong. A mind constantly fretted and over-anxious will wear out any system; while the body is really strengthened and supported by a calm, unruffled, and cheerful state of the mind and soul. Every calling has its cares and vexations, and teachers should make the best of theirs. Let them also be satisfied with doing well, and not be unjust to themselves, by being too generous to others.

It would seem, from this brief and general survey of our subject, that the influence of teaching is, in many respects

highly favorable to health, while in others it is equally injurious. Teachers owe it to their profession to spare no efforts on their part to remove or mitigate these injurious influences, — an object for the attainment of which the public will, slowly perhaps, coöperate with them, when teachers themselves shall enter with the right spirit upon its accomplishment. They also owe it to themselves to be more considerate and prudent in the use of their powers. Earnest and faithful they must be, if they are worthy of their calling; but there is a limit to their strength, beyond which they cannot go with impunity. In the performance of a reasonable amount of labor they will discharge their measure of duty, and then, when their days are ended, they will go down to the grave, not prematurely and with energies wasted, but full of years and with the serenity of

“One who wraps the drapery of his couch
About him, and lies down to pleasant dreams.”

A. P. S.

THE LEGACY OF PESTALOZZI.

[NOTE. Although we may take it for granted, that no teacher of experience has not heard something of the life and principles of the great Swiss school-reformer, Pestalozzi, we will, for the sake of our younger readers, give a very brief outline of his life, proposing, however, to do it soon in a more extended form.]

Pestalozzi was born, in 1746, in Zurich, Switzerland, where he received a good education. After trying various avocations, he settled upon a farm, (Neuhof), less as a practical farmer than as a philanthropist who endeavored to educate the neglected sons of the poor by means of manual labor and intellectual training. In this noble task he failed for want of funds, and dragged, amidst cares and poverty, a weary life, which was, however, occasionally relieved by the success of his literary labors. In 1799, after the French had overcome the heroic resistance of the people of Unterwalden, and given vent to their fury by burning their villages and by other

atrocities, Pestalozzi, then in his 54th year, appeared on this scene of desolation, with the firm determination to be a friend and teacher to the fatherless children, who were exposed to all the horrors of neglect and hunger. In Stanz he made his first experiment as schoolmaster, and devised and applied those educational ideas which have since made his name immortal. He was soon obliged to leave that ill-fated place, and, assisted by noble and disinterested friends, he continued his work at Burgdorf, and afterwards at Iverdon. There his institution obtained a European celebrity, and became a focus of attraction for many who flocked there in order to witness his enthusiasm and to study the principles of his method, which was destined to effect reform in the antiquated routine of popular instruction. The leading features of his method may be summed up as follows :

1. Education relates to the whole man, and consists in drawing forth, strengthening, and perfecting all the faculties, physical, intellectual, and moral, with which the Creator has endowed him ; or, to use Pestalozzi's own words, " Education has to do with the hand, the head, and the heart."

2. These faculties should be developed progressively, harmoniously, and simultaneously : for this purpose instruction should be carefully graduated, so that each explains the following ; care also being taken to exercise every faculty, not singly but in combination, and in that proportion which ensures harmony to the whole, following, as far as possible, the order in which they are naturally developed.

3. With a view to ensure a healthy activity of mind we should not commence with symbols and abstractions, but with realities and particulars ; we should proceed from the known to the unknown, from particulars to generals, from examples to rules, thus inverting the old, and, in but too many cases, the present order of teaching.

4. The work of a teacher should be analytical ; he should reduce his subjects to their elements ; but the work of the learner should be synthetical ; he should build up his own knowledge under the guidance of a superior mind, and thus in some measure be his own educator and his own judge.

5. The same principles which guide the intellectual culture should govern the moral. Precepts are to be deduced from actions, and what *objects* are to intellectual instruction, *actions* should be to moral.

Not many years before his death, which occurred in 1827, he dedicated 50,000 francs (the profits of the sale of his works) to the foundation of an asylum for poor orphan children, on which occasion he uttered the following address to his friends and pupils. It gives a good idea of the fulness of his heart, and of the richness and originality of his ideas, and may be considered not merely as an accompaniment to this gift, but as a bequest to all the real friends of education.

“Friends and Brethren: Education stands before me symbolized by a tree, which is planted near fertilizing waters. A little seed, which contains the essence of the tree, its very form and nature, is placed into the ground: see how it germinates in the maternal soil, and as it grows into life, the envelope drops and the seed dies and decays. Its organized life has penetrated into the root, on which foundation the plant expands into trunk, branches, leaves, flowers, and fruit. The whole tree is but an uninterrupted chain of organic parts, which already existed in its seed and root. Man is similar to the tree. In the unborn child are hidden those faculties which are to be unfolded during life. The individual and separate organs of his being form themselves gradually into unison, and build up principles of humanity according to the image of God. But the original sinfulness of man and the surrounding circumstances of temptation act injuriously upon him, as a dry, rocky soil, or one covered with weed, will damage and cripple the plant. There is, however, this difference between tree and man; while the tree cannot say to the rock ‘Be gone,’ or to the water ‘Come near,’ man possesses such power, by means of his free will, by which he imbibes the germs of evil as well as those of virtue.

“*The growth of man* and of his physical faculties is God’s work, — is the result of those eternal laws which He conferred upon man. *The formation of man* is arbitrary, and depends upon the various circumstances upon which his lot has been

cast. But *the education of man* is a purely moral result, and depends on the influence which his moral will exercises on the free and good use of his powers. It is not the educator, who puts any new powers or faculties into man, and who imparts unto him breath and life; he only takes care that no outward influence shall disturb nature's march of development. The moral, the intellectual, and the practical powers of man must be reproduced from their own principle, and not draw their nourishment from artificial substitutes. Thus, faith must be cultivated by our own act of believing, and not by a dogmatical reasoning about faith; love, by our own act of loving, and not by fine words about love; thought, by our own act of thinking, and not by a mere repetition of the thoughts of other men; and knowledge, by our own act of investigating and knowing, and not by endless talk about art and science in abstract.

"*In home education* I see that which is destined to act as the truest blessing for all the people, and especially for the poor. From this source proceeds the true efficiency of popular education. On this solemn day, in which I arrange and settle my worldly affairs, before passing through the valley of death to the regions of life and resurrection, — on this day, when I intend to erect a monument to the glory of God for purposes of love and faith, I come before you and pray, Oh! do not regard me in the nothingness of human weakness, as a crushed reed or a feebly glimmering wick, but receive my words as if spoken after my resurrection from the grave. . . . But my bones tremble! May I pronounce such words, unless I have seen the face of the Lord? O no; my address to you bears the impress of my flesh and human nature, which is full of good-will, but ever wandering through labyrinths of wrong and error. And yet, I pray you, listen with attention and confidence to my words. Accept them as the words of your father, who is approaching the grave, and who has deeply felt the misery of the poor, especially that portion which can be relieved by the blessings of education. Alas! it is only near the end of my career that I am enabled to give a mite for this purpose, and to leave its execution as a legacy to you.

Let my care for the sanctity of education devolve on you ; may you be filled by the thought of a better future, which is to bless coming generations. Be witnesses of the spirit which animated my youth, and which continues to glow even in my old age. Let every harsh and unkind feeling be banished from your hearts, through the power of faith and love. Let no one say, ' Christ did not love him who was wrong and acted wrong.' Yes : He did love him, He loved with divine love, He died for him. He did not find the sinner faithful, but rendered him faithful through his own faith ; He did not find him humble, but He made him so by His own humility. Truly, it was through His divine practice of humility that He conquered the pride of the sinner, and drew him to His forgiving bosom. Friends, brothers, if we do this, if we love each other as Christ loved us, we shall conquer all difficulties, and shall be able to build the welfare of our house upon that eternal rock upon which God has founded the welfare of the human race, through Jesus Christ our Lord." H. K.

FELLENBERG, THE FOUNDER OF THE FIRST AGRICULTURAL SCHOOL.

AMONG those who have influenced the improvement and education of the whole civilized world, is Emanuel de Fellenberg, the founder of the first Agricultural school. He was born in 1771, at Berne, Switzerland, and descended from a patrician family, his father a senator, having married the grand-daughter of the celebrated Dutch Admiral van Tromp. His mother was a pattern of a pure, self-devoting character, whose teaching and example imparted to the soul of young Fellenberg the wish to improve the moral and social condition of his fellow-men. She went with him into the dwellings of the poor, in order to make him acquainted with their misery and wants ; she also made him a susceptible witness of the blessings of benevolence, when accompanied by good advice and sympathizing help. After having completed his university studies, and made his debut in the legislative

assembly of his canton, which brought him in contact with the contending elements of the French revolution, Fellenberg resigned voluntarily, in 1799, all expectation of honor and distinction on the arena of political fame, and determined to devote all his energies to that great cause towards which all his predilections, the example of his mother and that of Pestalozzi (then engaged at Neuhof) urged him with irresistible power. In the same year he bought about 200 acres of barren, uncultivated land, at Hofwyl, a great portion of which was swamp. To convert this land, with the aid of young men from the lower classes, into rich fields, soon to be crowned with harvests, became now the task of his new undertaking. In spite of the sneers of his genteel friends, who were almost shocked to see a scion of the aristocracy engaged in such "low" pursuits, he succeeded beyond his expectations. By deep drains he converted the portion of his farm nearest to the river into rich pasture land, whilst the arable soil was ploughed and upturned to a considerable depth, and constantly improved by manure. In a few years rich harvests of wheat, flax, hemp, &c., waved over the former wilderness. This result encouraged Fellenberg to enlarge the accommodations for his Agricultural school; and aware that the expenses of this department would at first exceed its income, he wisely formed a Scientific Institution for the richer classes, who could afford to pay liberally for their tuition. He thus carried on a two-fold undertaking with an administrative power and skill which prevented him from committing the faults of Pestalozzi, who had been ruined by a similar enterprise.

At the head of the agricultural department he placed Wehrli, a man of great originality and simplicity of character, to whose kind and yet intelligent treatment of the pupils much of the success of the school is to be attributed. These pupils, it is true, consisted not of the lowest classes of society, or of such as are in this country placed in schools of reform, but they were the sons of farmers or even of others, who wished to make their sons acquainted with agriculture, partly for its own sake, and partly on account of the bodily and mental discipline which it affords. Although most of the

pupils were received without paying for their board, Fellenberg incurred no loss thereby, but proved that pupils, who enter such an institution at ten years of age, and remain there ten years, can, by their labor alone, defray their expenses for board, clothing, and instruction, besides having learned a useful occupation. In other words, he proved that such schools can be made self-supporting. The farm of Fellenberg was afterwards increased to 600 acres, and the addition of new tasteful buildings gave to Hofwyl the appearance of a village, which had arisen by the genius of one man. He did, however, more than merely show how a farm could be cultivated so as to benefit the laborer as well as the proprietor; he demonstrated also that agriculture is eminently adapted, in its various bearings and applications, to draw out the noblest powers of man, especially that of invention. Hence Hofwyl became a place from which issued improvements in agricultural implements, and where sowing and reaping machines were used with great advantage. The introduction of new seeds and plants, as well as the improvement of existing species, became another object of great importance, by which the whole community was greatly benefited. Thus Fellenberg, assisted by his sons, worked forty-five years on his beloved Hofwyl, till 1844, when he laid his weary head to rest.

His institution, like that of Pestalozzi, received great attention from the government, as well as private individuals, and enjoyed much patronage, especially from England, which is ever ready to appreciate operations of a practical character. But the greatest benefit derived from the labors of Fellenberg and Wehrli lies in the solution of that great question: "*What shall be done with the young inmates of the poor and work houses, or with neglected children?*" They must be separated from the bad example of the old paupers, and be entrusted to the care of an educational, and at the same time, a practical man, who shall attend to their physical, moral, and intellectual training. In this their new home they must learn the necessary branches of knowledge, but before all they must learn to work, for work is an antidote for many evils which idleness and shiftlessness bring in their train. They must earn

their own bread by means of that occupation which tends to strengthen body and mind, and brings them in contact with the direct works and productions of an all-wise Creator. Their energies must also be directed towards a particular branch of occupation, for which their talent renders them most suitable. From these considerations sprang — after the bright example of Hofwyl — the numerous agricultural institutions which we now see scattered over Switzerland, Germany, France, England, and the United States, although they may be known under different names, such as “Poor Schools,” “Industrial Schools,” “Reform Schools,” or, as in Michigan, “Agricultural University.” At Hofwyl, then, was the *Mother Institution*, of which, since Pestalozzi’s earlier undertaking proved a failure, we must consider Fellenberg as the practical author.

Comparing Fellenberg with his distinguished cotemporary, Pestalozzi, we find the following distinctive features in their character and principles. Pestalozzi’s principal object was to foster the internal growth of the intellectual and moral man. He asked not for what *society*, but for what God had destined the child. The position of each child in his establishment was accordingly founded not upon artificial institutions of society, but upon the spirit of freedom and brotherly love. Fellenberg, on the contrary, endeavored to trace out the shortest and most efficient way for rendering his pupils fit members of society; his was essentially an education for the world; every child was placed in his establishment exactly in that rank in which he would appear hereafter in life.

If these principles appear to be antagonistical, it is in form rather than in substance; for if a child has, up to a certain age, received a fair and complete education, according to Pestalozzi’s imperishable principles, he may well turn his attention to the practical wants of society, and to the rank and position which birth or circumstances have assigned to him. There was, however, something antagonistical in the character of these two men, which more than once prevented their closer association. Fellenberg, although excelling in practical energy and learning, did not possess that delicacy of sentiment, that

overflowing fulness of feeling, which induced Pestalozzi, although poor, to sacrifice his all, yea himself, for a great cause. Fellenberg preserved, perhaps from earlier associations, a certain love of command, of power, and consequently of *self*, which may act well in the organization and government of a whole, but less so in its details, since it often wounds or destroys the susceptibility of others; he therefore possessed few intimate friends, while Pestalozzi was beloved by all, and almost worshipped by some. The one died rich; the other struggled against poverty during all his life. But the names of both will be honored in the annals of history, for both have left living monuments behind in the *millions of children* whom their example and work have saved from physical, moral, and intellectual starvation.

H. K.

BRIDGEWATER TREATISES.

THESE celebrated works derive their name from the Rev. Francis Henry Egerton, Earl of Bridgewater, who died in February, 1829, and by his will, dated Feb. 25, 1825, directed certain trustees to invest £8000 to be placed at the disposal of the President of the Royal Society, to be paid to the person or persons nominated by him. The testator directed that the person or persons so selected, should be appointed to write and publish one thousand copies of a work, "on the Power, Wisdom, and Goodness of God, as manifested in the creation, illustrating each work by all reasonable arguments; as, for instance, the variety and formation of God's creatures in the animal, vegetable, and mineral kingdoms; the effects of digestion, and thereby of conversion; the construction of the hand of man, and an infinite variety of other arguments: as also, by discoveries, ancient and modern, in Arts and Sciences and the whole extent of Literature." The President of the Royal Society was then David Gilbert, and he appointed the following eight gentlemen, who wrote the "Bridgewater Treatises:—" Dr. Chalmers, John Kidd, Rev. Mr. Whewell, Sir Chas. Bell, Peter Mark Roget, Rev. Dr. Buckland, Rev. Wm. Kirby, and Wm. Prout.

RESIDENT EDITOR'S DEPARTMENT.

OUR EDUCATIONAL EXCHANGES.

WE publish below a list of the prominent educational journals of this country, which we commend to our readers as worthy of their patronage and attentive perusal. Every teacher in the choice of his reading should give due attention to those books which have special reference to his profession, and we know of nothing better for this end than the works we propose to notice. With one or two exceptions these periodicals are under the control of the various State Teachers' Associations, and are conducted by a board of editors representing the different grades of schools in the different sections of their respective States.

THE AMERICAN JOURNAL OF EDUCATION. Published quarterly, edited by HENRY BARNARD, LL. D. Vol. III. \$3.00 per annum. Hartford: F. C. Brownell.

THE AMERICAN JOURNAL OF EDUCATION, AND COLLEGE REVIEW. Published monthly. Editor: Absalom Peters, D. D. Associate Editors: Hon. Samuel S. Randall, Superintendent of Schools for the city of New York, Rev. Andrew Rankin, A. M., with Corresponding Editors in the several States. Vol. III. \$3.00 a year, in advance. New York: Calkins & Stiles, Publishers, 348 Broadway.

THE NEW YORK TEACHER. Published monthly, under the direction of the New York State Teachers' Association. Twelve Editors. Vol. VI. Terms, \$1.00 per annum, invariably in advance. Albany: James Cruikshank, 55 State street. 1857.

THE PENNSYLVANIA SCHOOL JOURNAL. Published monthly. Edited by Thomas H. Burrowes. Vol. VI. \$1.00 per annum, in advance. Lancaster: W. B. Wiley. 1857.

THE OHIO JOURNAL OF EDUCATION. Published monthly under the auspices of the Ohio State Teachers' Association. John D. Caldwell, Editor, with six Associate Editors. Vol. VI. Terms, \$1.00 per annum, invariably in advance. Columbus: Printed by the Ohio State Journal Company. 1857.

THE CONNECTICUT COMMON SCHOOL JOURNAL. Published monthly under the direction of the Connecticut State Teachers' Association. Resident Editor, Charles Northend, New Britain. Vol. IV. New Series. \$1.00 a year, in advance. Hartford: F. C. Brownell.

THE MICHIGAN JOURNAL OF EDUCATION. Published monthly, under the auspices of the Michigan State Teachers' Association. John M. Gregory, A. M., Editor, assisted by twelve Associate Editors. Vol. IV. \$1.00 per annum, in advance. Ann Arbor: E. B. Pond. 1857.

THE ILLINOIS TEACHER. Organ of the State Teachers' Association. C. E. Hovey, Editor, with twelve Corresponding Editors. Published monthly. Vol. III. \$1.00 a year, in advance. Peoria: Nason & Hill. 1857.

THE RHODE ISLAND SCHOOLMASTER. Published under the supervision of the Commissioner of Public Schools. Vol. III. \$1.00 per annum. Providence: Wm. A. Leonard, Publisher. 1857.

THE INDIANA SCHOOL JOURNAL. Published on the 15th of each month by the Indiana State Teachers' Association. GEORGE B. STONE, Resident Editor, Indianapolis. W. D. HENKLE, Mathematical Editor, Richmond, with seven Associate Editors. Vol. II. Terms \$1.00 a year. Indianapolis: Cameron & McNeely. 1857.

THE WISCONSIN JOURNAL OF EDUCATION: The Organ of the State Teachers' Association and of the Department of Public Instruction. Published monthly. Edited by a committee of nine. Vol. II. \$1.00 per annum. Racine: Carswell, Harrison & Co. 1857.

THE VOICE OF IOWA: A monthly Journal of Civilization, devoted to Education, Local History, Arts and Sciences,—Organ of the State Teachers' and Phonetic Associations. James L. Enos, Editor. Vol. II. Terms \$1.00 a year, in advance. Cedar Rapids. 1857.

THE NEW HAMPSHIRE JOURNAL OF EDUCATION. Published under the auspices of the New Hampshire State Teachers' Association. Rev. Wm. L. Gage, Editor, with twelve Associate Editors. Vol. I. \$1.00 a year. Manchester: B. F. Wallace, 79 Merchants' Exchange. 1857.

SOUTH WESTERN SCHOOL JOURNAL. Rev. J. H. Heywood and Noble Butler, A. M., Editors. Monthly. Vol. II. 50 cents per annum. Louisville, Ky.: A. F. Cox, Publisher. 1857.

THE WESTERN COLLEGE ADVOCATE AND MISCELLANEOUS MAGAZINE. Published monthly. S. Weaver & W. H. Shuey, Editors and Proprietors. Vol. I. Terms, fifty cents per annum. Western, Linn County, Iowa. 1857.

THE MISSOURI JOURNAL OF EDUCATION. Published monthly, under the direction of the State Teachers' Association. Ira Divoli, Local Editor. Vol. I. \$1.00 per annum. St. Louis, Mo.: E. K. Woodward, Publisher. 1857.

THE TEACHERS' ADVOCATE : Devoted to Education, Literature, and Science. Published monthly. J. P. Ellinwood, Editor. Vol. II. 50 cents per annum. Dayton, O. : Rogers, Ellis & Co. 1857.

EDUCATIONAL HERALD ; Devoted to Education and the Interests of Schools, Teachers, and Pupils. Rev. O. St. John, Editor. Vol. I. Terms, 50 cents per annum, in advance. New York : Smith & Boyd, Publishers and Proprietors. 1857

JOURNAL OF EDUCATION ; AND JOURNAL DE L'INSTRUCTION PUBLIQUE. Montreal, L. C. Published in English and French. Pierre J. O. Chauveau and Jos. Lenoir, Editors. Vol. I. Five shillings per annum. 1857.

JOURNAL OF EDUCATION. Toronto, Upper Canada. J. George Hodgins, Editor. Vol. X. Terms, five shillings per annum.

ORATORY.—Popularly speaking, the orator is a man who does not lose himself as he becomes excited, but who, the more frenzied he waxes, grows in the same degree the more shrewd, the more perfect in his command of all his faculties. Speaking more scientifically, the orator is a man who can never cogitate better than when he is agitated. That there are such men, no one can doubt. Placed before an audience, the majority of men, as we have already said, become helpless and foolish ; what sense or wit they have forsakes them, often carrying memory, and grammar, and the very power of coherent articulation along with it.

But there are others, who positively outdo themselves when they are placed in the same circumstances : who seem as if they had found their element, and who move in it in a way to surprise themselves and others ; in whom the excitement of speaking, so far from numbing their various faculties, seems to evoke some for the first time, and to make all more nimble and alert—memory, wit, fancy, imagination, speculative intellect, and even judgment and critical taste, simultaneously. They positively become more cool, more shrewd and subtle, and more self-possessed, less apt to blunder as they become more fervid.

There are many common proverbs and observations respecting orators which in reality embody this theory. When some one jocosely defined an orator as “ a man who can speak nonsense till sense comes,” the definition, though satirical, was scientifically accurate. Where another—an American orator, we believe—declared that he “ never could make a speech without first making a few remarks,” he said substantially the same thing. But perhaps the finest recognition of the notion, as we have been expounding it, is that contained in a very happy phrase, used by some ancient writer on rhetoric—we think by Quintilian. *Clarescit urendo*, “ He grows clear by burning,” is the phrase in question ; used, too, if we remember aright, precisely in reference to the orator. Whether it was originally so used or not,

it suits him well. The orator is emphatically the man who, *clarescit urendo*, is clearest when he is most fervid; shrewdest, when he is most excited; universally most capable, when he is in the highest state of oratorical paroxysm.—*Selected.*

FREE SCHOOLS.—There must ever be danger in a monopoly of learning. An equal distribution of the benefits of the schools can alone preserve the masses from becoming the prey of designing men. A thoroughly educated democracy is the only safe democracy. We may admit the fact that

“On every soil

The men who *think* must govern those who *toil*.”

But elevate the toilers with the blessings of education, and the toilers become thinkers, who, in their turn, govern their governors, till government becomes a common boon, mutually held and mutually relinquished. Throw open the doors of the high school, the academy, and the college, to the boy who has thumbed all the books of the grammar school, and yet feels himself far below the standard to which he aspires, and you fill the land with educated men, such as no country on earth can ever boast. The aristocracy of wealth defies all statute restrictions on its powers and privileges. Wealth cannot, in our land, be legislated down to an inferior station, but poverty may be legislated up, by throwing open the same avenues of learning to rich and poor alike. Let legislation give to the child of the poor man the same facilities for acquiring a superior education which wealth now gives to the son of the millionaire, and the artificial distinction between the two extremes will be destroyed by their equalization on a common educational platform. Poverty, with talent and industry, need not fear a tilt, in our land, with wealth accompanied with mediocrity. It is only when poverty and wealth are both attended with limited educational culture that the former may give up the contest.—*Selected.*

PHILOSOPHY IN COURT.—We observe that a prize is offered this year by Harvard College of \$500 to any pupil who shall be decided by the Corporation to have attained the greatest skill in mathematics. The person who offers the prize, which is only proposed for this year, is Uriah A. Boyden, a civil engineer of Boston.

This gentleman was concerned in a suit last year, brought by him in the Supreme Court of Massachusetts against the Atlantic Cotton Mills of Lawrence, which was of a very interesting character, but has never, so far as we are aware, come before the public. Mr. Boyden had agreed to make a turbine water-wheel for the Atlantic Mills, which should save or “utilize,” as it is termed, seventy-six per cent. of the water power; if he succeeded in saving that per centage, he was to have \$2000; if not, he was to have nothing; and for every one per cent. above that he was to receive \$350. Mr. Boyden went to work and produced a wheel which saved, as he affirmed, *ninety-six per cent.* The labor involved in this result may be imagined, from the fact that Mr. Boyden spent more than \$5000 in the mere mathematical calcula-

tions. The Company had provided no sufficient means of testing the question practically, and as the per centage claimed by Mr. Boyden was altogether unprecedented, they contested the claim.

The case went into court. No jury on the globe could comprehend the question, and the learned bench also found itself entirely at fault. The case was accordingly referred to three well chosen parties: Judge Joel Parker of Cambridge, Prof. Benjamin Pierce, the mathematician, and James B. Francis of Lowell, the agent of the united companies of Lowell, in the management of the common water power. Prof. Parker furnished the law, Mr. Francis the practical acquaintance with hydraulics, and Prof. Pierce the mathematical knowledge. That learned geometer had to dive deep and study long before the problem was settled. But settled it was, at last, and in Mr. Boyden's favor, to whom the referees awarded the sum of eighteen thousand seven hundred dollars. Mr. Boyden had previously constructed turbine wheels that utilized respectively the extraordinary amounts of eighty-nine and ninety per cent.; the last wheel, utilizing ninety-six per cent., exceeds anything of the kind that was ever made. The wheel is one hundred and four and three-quarters inches in diameter. — *N. Y. Evening Post.*

MATHEMATICAL QUESTIONS AND SOLUTIONS.

QUESTION 27. Solve the equations, $x^2 + y^2 + xy = a$, $x^2 + z^2 + xz = b$, and $y^2 + z^2 + yz = c$.
J. Q. A.

Greensburg, Ind.

QUESTION 28. Divide 87mi. 6fur. 23rd. 4yd. 2ft. by 7, performing and proving the work according to the rules for Compound Division.
J. Q. A.

QUESTION 29. What number can be divided into two unequal parts, such that the square of the less added to the greater shall be equal to the square of the greater added to the less?
A. G. B.

QUESTION 30. Solve the equations $x^6y^3 - x^{12} = 9728$, and $x^2y^5 + x^8y^2 = 40320$, without resorting to Newton's, Horner's, or other method of approximation.
N. C.

QUESTION 31. The hypotenuse of a right-angled triangle is h , and the difference between the radius of the inscribed circle and the side of a square inscribed in this circle is d . Required the sides of the triangle.
N. C.

QUESTION 32. Given $2^{\frac{1}{2}}x^{\frac{11}{6}}y^{-\frac{1}{3}} + 2^{\frac{3}{2}}x^{\frac{3}{2}} = x^{\frac{1}{2}}y^{\frac{7}{6}} + 2^{\frac{3}{2}}x^{\frac{5}{6}}y^{-\frac{1}{3}} + 2y^{\frac{3}{2}} + 2^{\frac{5}{2}}x^{\frac{1}{2}}$, and $y^2 = a^4x^{-1}y^{-1}$, to find the values of x and y .
D. W. H.

QUESTION 33. What is the length of the longest pole which can be put up a chimney, the height of the jamb being a , the depth of the chimney b , and its width c inches?
M. C. S.

ANSWER TO QUESTION 14.

The agreement indicates that 7 rods of B's share require as much labor as 9 rods of A's share; B should, therefore, build 7 rods as often as A builds 9. A must, therefore, build $\frac{9}{16}$ of 100 rods, and B $\frac{7}{16}$.

It is true that, at the respective prices named per rod, A and B would each receive only \$49 $\frac{7}{8}$, leaving \$1 $\frac{9}{16}$ undivided. But those prices were only fixed upon as indicating the relative difficulty of the two jobs. As each has performed an equal amount of labor, they are entitled to equal pay, and should divide the remaining \$1 $\frac{9}{16}$ equally between them. P. E. C.

Other solutions have been given, but the preceding seems most appropriate. In fact, the conditions of the question are inconsistent with each other; and, although the question may be a very proper one for legal adjudication, it hardly comes within the sphere of the exact sciences. A gentle rap from one of our valued correspondents, expressing the sacredness of our domains, is gratefully acknowledged. Ed.

SOLUTION OF QUESTION 17.

Let x = height of the mercury. The air will then be expanded from 25 inches to $50 - x$ inches. The height of the mercury depends on the difference between the internal and external pressure, which is $\frac{25 - x}{50 - x}$ of the entire pressure of the atmosphere.

$x = \frac{25 - x}{50 - x}$ of 30 = $\frac{750 - 30x}{50 - x}$, which, solved by quadratics, gives $x = 40 \pm 29.15 = 10.85$ inches. P. E. C.

SOLUTION OF QUESTION 21.

- (1) $x^2 - a^2 = ax - a^2$. Separating into factors,
- (2) $(x + a)(x - a) = a(x - a)$; or since $x = a$,
- (3) $(x + a) \times 0 = a \times 0$; dividing by 0,
- (4) $(x + a) \times \frac{0}{0} = a \times \frac{0}{0}$, the truth of which depends entirely upon the value of $\frac{0}{0}$. Now, since the product of the divisor into the quotient must equal the dividend, it follows that $\frac{0}{0} =$ any number whatever. For if we multiply any number by 0 = the divisor, we shall have 0 = the dividend. But in particular cases like this, $\frac{0}{0}$ has a definite value, for equation (4) can be true only when $\frac{0}{0} = 0$, or when its value in the first member has the same ratio to its value in the second that a has to $x + a$. The fallacy in the operation given consists in assuming $\frac{0}{0} = 1$, whereas in this case it is *not* equal to one. W.

The fallacy in Question 21 seems to be in dividing $x^2 - a^2 = ax - a^2$ by $x - a$, each of these members being equal to zero. Zero divided by zero

equals any assignable quantity; hence, $x^2 - a^2$ divided by $x - a$ may equal one quantity, and $ax - a^2$ divided by the same, another.

Is there not the same fallacy in "A. A. R.'s" solution of "Question 13" in dividing $(x - 2)(x^2 + x - 4) = 0$ by $x - 2 = 0$? E. F., JR.

We think that the operation mentioned in the query is perfectly legitimate, and one in very common use. A product being zero, if either of its factors is zero, when we strike out the factor $x - 2$ and put the other factor equal to zero, we do not divide by zero, for the two factors cannot, in this case, be zero at the same time. ED.

If $x = a$, then $x - a$, $x^2 - a^2$, and $ax - a^2$ are evidently each equal to zero. Hence, $\frac{x^2 - a^2}{x - a} = \frac{0}{0} = x + a$; and $\frac{ax - a^2}{x - a} = \frac{0}{0} = a$. Now we have no right to assume the equality of these two expressions, because the value of $\frac{0}{0}$ in one case is different from the value of $\frac{0}{0}$ in the other. The fallacy, then, consists in assuming $\frac{0}{0} = \frac{0}{0}$. M. C. S.

Explained also by M. P. P., W., & H. H. B.

SOLUTION OF QUESTION 22.

Let $x =$ length, and $y =$ breadth; then

(1) $xy + 2x + 3y + 6 = xy + 64$, and

(2) $xy + 3x + 2y + 6 = xy + 68$. Reducing by cancelling equal terms,

(3) $2x + 3y = 58$

(4) $3x + 2y = 62$. The equations (3) and (4) give $x = 14$, $y = 10$.

Hence $xy =$ area $= 140$ rods.

D. W. H.

Solved also by a great number of others.

ANSWER TO QUESTION 26.

The agent's liquor account stands as follows:—

Dr.		Cr.	
Stock to commence with,...	\$59.50	Sales,.....	\$293.85
Purchases,	281.55	Stock at close,.....	81.00
Profits to credit of Town,...	33.80		
	<hr/>		<hr/>
	\$374.85		\$374.85

His account with the Town is as follows:—

Dr.		Cr.	
To liquor returned,.....	\$81.00	By Cash,.....	\$58.00
Salary for agency,.....	69.00	Liquors received,.....	59.50
Balance in cash,.....	1.30	Profit as per liquor acc't,	33.80
	<hr/>		<hr/>
	\$151.30		\$151.30

The agent must pay the Town as above, \$1.30.

The Town had at the start

Cash,.....	\$58.00
Liquor,.....	59.50
	<hr/>
	\$117.50

After settling with the agent the Town has cash, \$1.30

Liquor,..... 81.00

82.30

And the Town's loss will be,..... \$35.20

s.

We are asked why some of our problems are made so simple ; and, from the lack of solutions, it might be inferred that some would inquire why we insert others so difficult. But our object is not so much to test mathematical ability, as it is to encourage and cultivate it. It is presumable that a great diversity of mathematical attainments exists among our readers, and as we would not offend our brethren or our sisters by our meats, we mean to place upon our table articles adapted to the tastes and digestive powers of all our guests. Besides, the youngsters are invited to partake, and we believe that they are most effectively nourished by food of easy assimilation. We would request our friends who send in difficult questions, to transmit solutions *with* the questions, as it does not seem well to propose mere puzzles or impossibilities.

ED.

INTELLIGENCE.

TO SCHOOL COMMITTEES. — By the following law, which was passed during the last session of our legislature, it will be seen that members of School Committees are to be hereafter elected for a term of three years. This is obligatory upon all towns, and will become so in cities if accepted by the municipal authorities. We have already expressed our opinion as to the favorable working of this enactment, on the ground that it will guard against the too sudden changes which sometimes occur in the general management and supervision of public schools. The act to which we refer is as follows : —

CHAP. 270. An Act providing for the Election of School Committees.

Be it enacted, &c., as follows :

Sect. 1. The inhabitants of every town in this Commonwealth shall, at the next annual meeting after the passage of this act, choose by written ballot, a board of school committee, which board shall consist of three, six, nine, or twelve persons, or any other number divisible by three, and said board shall have all the powers, and be subject to all the duties and liabilities, provided by law.

Sect. 2. At the first annual meeting after the passage of this act, each and every town in this Commonwealth shall, by vote of the inhabitants thereof, decide of what number the aforesaid board shall consist. One-third of said board shall then be elected for the term of one year, one-third for the term of two years, and one-third for the term of three years ; after which first election, one-third of said board shall be elected for the term of three years.

Sect. 3. Whenever from any cause any vacancy shall occur in the aforesaid board, such vacancy may be filled in the same manner as is now provided by law : *provided*, any person elected or appointed to fill any vacancy as aforesaid, shall hold office only during the term for which his predecessor was elected.

Sect. 4. Whenever any town shall decide by vote to increase or diminish the number of persons constituting the aforesaid board, such increase may be effected by adding one or more to each class, which additional person or persons shall hold office according to the tenure of the class for which he or they may be elected ; and a diminution may be effected by a successive decrease of one or more at each annual election thereafter, until the desired number shall be struck off : *provided*, that in case one or more of the number of said board shall be struck off in any one

year, the same number shall be struck off in each of the two succeeding years, so that the diminution shall equally affect each class.

Sect. 5. Any city in this Commonwealth, in which the board aforesaid is elected by the people, may avail itself of the provisions of this act, as to the election of such board: *provided*, the city council of such city shall vote so to do, in which case the number of which such board shall consist shall be determined by a joint vote of said city council.

Sect. 6. All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed. [*Approved May 30, 1857.*]

PLYMOUTH COUNTY TEACHERS' ASSOCIATION.—The fifteenth semi-annual meeting of the Plymouth County Teachers' Association was held at North Middleboro', June 12th and 13th, William E. Sheldon, of East Abington, President, and L. A. Darling, of the Bridgewater Normal School, Secretary.

The Throne of Grace was addressed by Rev. Mr. Packard, of N. Middleboro'; after which there were appointed, as usual, the various Committees on Criticism, Attendance, Resolutions, Arrangement of Business, &c. The first topic for discussion was, "The best method of studying the English language." This subject was discussed during the day by Messrs. Stone and Thomas of Plymouth, Conant and Darling of Bridgewater, Dickerson of Plympton, Bates of Abington, Colegrove and Pratt of Middleboro', and Rev. Messrs. Rodman of Bridgewater, and Richardson of Middleboro', and others.

In the afternoon, Hon. Geo. S. Boutwell spoke for an hour on various topics connected with education, such as public speaking—the importance of giving more attention to primary schools, and the education of primary school teachers—the evils of non-attendance—the different methods of teaching—the comparative merit of private and of public schools—and the aid, sympathy, and coöperation that should be extended to the teacher.

On Friday evening, Joshua Bates, Esq., Principal of the Brimmer School, Boston, delivered a lecture upon "The Requisites for Success in Teaching." Some of those requisites were said to be, an ability to read character readily—a love for imparting knowledge—the faculty of governing—affable and attractive manners—the power of self-control—the ability to inspire enthusiasm in pupils—and the power to form in scholars a systematic and correct character. The lecture was an able production, and was received with much favor. It bore ample evidence of coming from one who has had much and successful experience in the school-room.

On Saturday morning, Samuel J. Pike, Esq., Principal of the Somerville High School, delivered an excellent lecture upon "The Democratic Element in School Government." The lecturer would deprecate extreme severity; government should be personal, and scholars should be trusted as though they were honest, upright, and truthful. Little annoyances should not be magnified by the teacher into giant sins. The school-room should be rendered attractive, and, in morals, pupils should be taught to become their own reformers. The lecture, of which the above is but a meagre report, was sound in its doctrine, beautiful in diction, and happily delivered.

After the above lecture, a portion of the day was occupied in discussing "The Best Method of Teaching Morals in School."

A prize of \$6 was awarded to E. W. Dickerson, of Plympton, for an Essay on "A Course of Self-improvement for the Teacher."

Mr. Stone, of Plymouth, commended the "Massachusetts Teacher" to the members of the Association; upon which a committee was appointed to solicit subscriptions, which committee afterwards reported a goodly number.

It was voted to send a delegation to the next meeting of the American Institute of Instruction.

During both days of the Convention, the weather was unusually pleasant and

the attendance good; about two hundred teachers and educators, besides others, being present. All were greatly indebted to the citizens of Middleboro' for their hospitality, which was so abundantly and so cordially extended to them.

A. P. S.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The eleventh annual meeting of this Association will commence its sessions at Montreal, Wednesday, August 12th.

SIR RODERICK MURCHISON and other gentlemen of eminent scientific attainments have intimated their intention of being present. Arrangements have been made for excursions to the Saguenay River, Ottawa City, and the Falls of Niagara, after the conclusion of the ordinary business.

NEW HAMPSHIRE STATE TEACHERS' ASSOCIATION.—We understand that the next annual meeting of this Association is to be held in Concord, commencing on Tuesday, August 4th. An address is to be delivered by Rev. L. Whiting, of Portsmouth, and another by Professor Knight, of New London. Essays are to be read by several members of the Association, and various topics of interest will be presented for discussion. From what we know of the arrangements that are making and have already been made, we anticipate a useful as well as attractive meeting. Teachers and friends of education should "make a note" of the time, and plan their business so as to be there.

NATIONAL TEACHERS' ASSOCIATION.—We are requested to give notice that this Association will meet in the *Controllers' Rooms, in the Athenæum Building, corner of South 6th and Adelphi streets, PHILADELPHIA, on the 26th of August, at 9 o'clock, A. M.*

Two addresses are to be given by distinguished educational gentlemen.

UNIVERSITY OF VERMONT.—The annual Commencement of this Institution occurs the present year on Wednesday, August 5. The exercises connected with Commencement will be as follows:—Address before the Society for Religious Inquiry, on Sunday, August 2, at 7½ P. M., by Rev. Israel H. Levings, of Madrid, N. Y. Oration before the Phi Beta Kappa Society on Tuesday, August 4, at 10½ A. M., by Prof. Fisher, of Yale College. Celebration of the Literary Societies at 2 P. M. Oration by Professor Upson, of Hamilton College. Poem by Rev. E. E. Higbee, of Bethel, Vt. Exhibition of the Junior Class at 7½ P. M.

A Mr. Gaine has invented and patented, and Messrs. De La Rue & Co. are about to introduce into the market, a new article of paper, which will be of great value and importance. They call it parchment-paper. Its properties are strength and resistance to water. It is pronounced superior to parchment, which is injured by moisture; and the inventor predicts for it universal use in school-books, legal documents, book-binding in old vellum style, and all other purposes where indestructibility is a desideratum in paper. The process is applicable to any ordinary paper, even after it is printed upon, for the printed matter is not in the least obliterated.

ANTIOCH COLLEGE FAILED.—Though Antioch College was never more successful as a literary institution than it has been during the last year, yet having become deeply involved in financial embarrassments, it has, as has before been stated, been obliged to go into insolvency, and make an assignment of its property. Its indebtedness was over \$120,000. We are glad, however, to be able to announce to the friends of the institution, that by the aid of private contributions it will be sustained another year, when it is hoped the College will be placed on a secure and permanent

foundation. The bankruptcy of the College will necessitate the reduction of the number of professorships and the dismissal of some of the teachers.

The widow of Hugh Miller is to have a pension of £70 a year, and efforts are to be made to secure a similar provision for the family of Douglas Jerrold.

EXTENSIVE USE OF THE BRITISH MUSEUM.—The number of visits made to the reading rooms of the British Museum last year, for study or research, was 53,422, or more than a thousand a week upon the average throughout the year.

REVIEWERS' TABLE.

THE UNITED STATES GRINNELL EXPEDITION IN SEARCH OF SIR JOHN FRANKLIN. *A Personal Narrative, by Elisha Kent Kane, U. S. N. New edition. Philadelphia: Childs & Peterson. 1857. 1 vol., 8vo, pp. 552.*

ARCTIC EXPLORATIONS. *The Second Grinnell Expedition in search of Sir John Franklin, 1853, '54, '55, by Elisha Kent Kane, M. D., U. S. N. Illustrated by upwards of 400 Engravings. 2 vols., 8vo. Philadelphia: Childs & Peterson. 1857.*

We notice these volumes, not because their merits are not familiar to our readers, but for the purpose of recommending them as valuable works for school libraries. There is hardly anything more interesting to young persons than personal narratives and biographical sketches, and when these are united with important discoveries and useful scientific information, a double object is attained. The simple and graceful style in which these works are written, the hardships and adventurous daring which they record, the firm resolve and unselfish devotion to science which they exhibit, together with the various contributions to geographical discovery which they contain, will commend them to every teacher as desirable books for the general reading of pupils under his charge.

ILLUSTRATED SCHOOL HISTORY OF THE UNITED STATES AND THE ADJACENT PARTS OF AMERICA, *from the Earliest Discoveries to the Present Time; embracing a full account of the Aborigines; Biographical Notices of Distinguished Men; Numerous Maps; Plans of Battle-fields, and Pictorial Illustrations, and other Features calculated to give our Youth correct ideas of their Country's Past and Present, and a taste for Historical Reading. By G. P. Quackenboss, A. M. New York: D. Appleton & Co. 1857.*

The author of this book states in its preface that he "has aimed to be *simple*, that youth of lower as well as advanced classes may understand him; *clear*, that no indistinct or erroneous impressions may be conveyed; *accurate* in the recital of facts, and *interesting* as regards both matter and style."

It is sufficient for us to say that the author, setting out with this high aim, has accomplished his purpose in a most admirable manner.

This History is of convenient size, and, altogether, is one of the most elegant and attractive school-books yet published. H.

SCHOOL DAYS AT RUGBY. *By An Old Boy. Boston: Ticknor & Fields.*

Except some faults of execution and style, of which the most offensive is an artificial and laborious smartness at the opening, this book is admirable. It bears its own evidence of fidelity and sincerity; of truthfulness in delineating the life of a great and noble school. One of its high merits is its exhibition of a boy's hearty and healthy nature. In the midst of mischievous ingenuity; through the audacity of reckless adventure; under the evasion or defiance of authority, we detect still the sense of honor, the generosity, the sensitiveness and tenderness which mark the

true man. This is developed with real artistic skill in the portraiture of George Arthur. His character, sickness, and death carry to those about him influences at once pathetic and irresistible, which we may at first consider overrated, but which are nevertheless natural and genuine. We have gained from the story a deeper conviction of the imperative duty of studying carefully and lovingly boyish temper and movement, and so managing it as to injure it neither by indulgence nor constraint. Signally clear, however, above all its other characteristics, is its representation, by suggestive rather than descriptive power, of the sway of a great, wise, and liberal mind. The picture of Dr. Arnold, drawn by an affectionate and reverent hand, is full of instruction for us. The model of the learned, kind, conscientious, Christian teacher is here sketched for our cordial imitation. The strong mind, the comprehensive culture, the large heart, the firm hand, were all continually in exercise at that school, of which it has been said, "At the university, youths from other quarters might excel in the quickness, the cleverness, and, it might even at times happen, the minute accuracy, of school-boys; those from Rugby had the character, the thought, the deliberate purpose of men."

To teachers, then, we commend this lively volume as full of reliable suggestions. It is fresh, vigorous, good-humored; more than that, it is fervent, truthful, grateful. As we read, we forget that we are in the midst of a community of boys, finding there the purposes, the forces, the devotedness of maturer growth.

Such power as the author displays is worthy of a more careful practice, resulting, as it must, in a more satisfactory mode of execution. F.

THE CONSTITUTIONAL TEXT-BOOK; *A practical and familiar exposition of the Constitution of the United States, and of portions of the Public and Administrative Law of the Federal Government. Designed chiefly for the use of Schools, Academies, and Colleges, by Furman Sheppard. Philadelphia: Childs & Peterson. 1857.*

This small treatise seems admirably adapted for the purposes intended, and we can safely recommend it as a good text-book upon the Constitution of our country. This branch of study certainly merits one of the first places in the course of instruction pursued in common schools. Although it has been hitherto much neglected, yet we are glad to see it occupying very generally the attention of teachers.

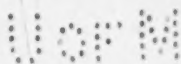
EDITORIAL POSTSCRIPT.



AUGUST, 1857.

THE SUMMER VACATION.

WE once heard a teacher remark that he found it more difficult to dispose of his time satisfactorily on Saturday afternoon, than for all the rest of the week. "Everything to do and no time to do it in," seems to apply to that odd half day—the teachers' perquisite. Many of our readers will apply it to vacations, also. Teachers are usually most extravagant in their plans for vacation. Much is deferred to be done at that time; but, alas! not often is it all accomplished.



Reader, you are probably now enjoying your long vacation. We hope so, at least, for no school can be of much comfort or profit to teacher or pupil, in the sultry, sweltering weather of August.

Now, how do you propose to spend your four or six weeks of leisure? Not, we hope, in sight of your school-room, or in "reading up" the studies of the next term. Cast off the cares of school, leave the study table, divert the mind, and develop muscle. It is the best preparation you can have for the labors of the coming Autumn. Ascend Mount Washington, bathe in Lake George, or go and gaze upon the Pictured Rocks of Lake Superior, and have a chat with the Chief of the Ojibwas in his lodge on the shores of the "Great Lake." Avoid cities, use books sparingly, and keep close to nature.

"But it costs money to travel!" True; but a little wholesome retrenchment in some of the needless, petty luxuries of the daily expense account, will, in a short time, provide the means. "Many mickles make a muckle," as you know. It is a fact, however, not to be denied, that the meagre compensation received by most teachers, compels economy; but it is very poor economy in any one to rob himself entirely of that recreation which health of body and of mind absolutely requires, and by the aid of which he may accomplish an increased amount of labor, and with greater ease and success. Go somewhere, therefore, to recruit, if no farther than to the nearest brook or mountain in your vicinity, and bring home—what fish you can catch, and your pockets full of rocks, (*literal rocks*, of course,) for your geological cabinet.

But there is other work in hand, and other attractions for this present vacation. "Every man has an axe to grind," says the old proverb; whereupon, says one proverbial for his shrewdness, "Every man has need to grind his axe." Nothing is more needed by teachers at the present time for their improvement, than to come more in contact with each other, to rub off the rust of stereotyped habit, and to interchange experiences upon matters pertaining to their profession. Now, the present month has a full programme of meetings for teachers and educators. There will be the Annual Meeting of the New York State Teachers' Association, August 4th, 5th, and 6th; the session of the American Association for the Advancement of the Sciences, where great men "do congregate," at Montreal, Aug. 12th; the meeting of the American Institute of Instruction, at Manchester, N. H., Aug. 18th, 19th, and 20th, with a good list of lecturers, and topics for discussion; the Vermont State Teachers' Association, during the same week, at Northfield, the heart of the Green Mountain State; and the National Teachers' Convention, at Philadelphia, the last week in August.

These gatherings will furnish a rich "feast of reason and flow of soul;" and an attendance upon one or more of them will "grind your axe." In other words, it will give you many new ideas upon your profession, extend your acquaintance among your fellow teachers, revive your jaded spirits, and give you a new and wonderful zest for your occupation. Although you may feel that you can hardly afford to go, if the actual benefit of such occasions is considered, you can hardly afford to stay away.

Rusticate, recreate, in some way or other, and do n't fail to be at some of the above-named Conventions.

☞ **TO CORRESPONDENTS.**—Contributions for the *Massachusetts Teacher* must be accompanied with the real name of the author, not necessarily for publication, but as a guaranty of good faith. We cannot undertake to return rejected articles.